

# PATENT COOPERATION TREATY

RECEIVED

SFP 29 2003

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

DOCKETING  
SAN DIEGO

## NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT OR THE DECLARATION

(PCT Rule 44.1)

To:  
GREGORY P. EINHORN  
FISH & RICHARDSON P.C.  
4350 LA JOLLA VILLAGE DRIVE, SUITE 500  
SAN DIEGO, CA 92122

Docketed By Billing Secretary

Due Date: 12/26/03

Deadline:

Initials: 007006 007121 007151 007CA1

Applicant's or agent's reference

International application No.  
PCT/US02/20193

Date of Mailing  
(day/month/year)

FOR FURTHER ACTION See paragraphs 1 and 4 below

International filing date  
(day/month/year)

24 June 2002 (24.06.2002)

Applicant  
DIVERSA CORPORATION

1. ☒ The applicant is hereby notified that the international search report has been established and is transmitted herewith.

### Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the international application.

**When?** The time limit for filing such amendments is normally two months from the date of receipt of the international search report.

**Where?** Directly to the International Bureau of WIPO, 34, chemin des Colombettes  
1211 Geneva 20, Switzerland, Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. ☐ With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

- ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.  
☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

### 4. Reminders

Shortly after 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90 bis.1 and 90 bis.3, respectively, before the completion of the technical preparations for international publication.

Within 19 months from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later); otherwise the applicant must, within 20 months from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of 30 months (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the PCT Applicant's Guide, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the ISA/US  
Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Authorized officer  
Ethan Whisenant, Ph.D.

DOCKETED BY PRACTICE SYSTEMS

ACTION CODE: CONFIRM ABS.

BASE DATE: 9/24/03

DUE DATE: 10/24/03

DEADLINE: 10/24/03

INITIALS: CEM

RECORD:

DOCKETED BY PRACTICE SYSTEMS

ACTION CODE: RESP TO ISR

BASE DATE: 9/24/03

DUE DATE: 11/24/03

DEADLINE: 11/24/03

INITIALS: CEM

RECORD:

# PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:  
GREGORY P. EINHORN  
FISH & RICHARDSON P.C.  
4350 LA JOLLA VILLAGE DRIVE, SUITE 500  
SAN DIEGO, CA 92122

## PCT

### NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT OR THE DECLARATION

(PCT Rule 44.1)

Applicant's or agent's file reference 09010-007WO6	Date of Mailing (day/month/year) <b>26 SEP 2003</b>  <b>FOR FURTHER ACTION</b> See paragraphs 1 and 4 below
International application No. PCT/US02/20193	International filing date (day/month/year) 24 June 2002 (24.06.2002)
Applicant DIVERSA CORPORATION	

1. ☒ The applicant is hereby notified that the international search report has been established and is transmitted herewith.

**Filing of amendments and statement under Article 19:**

The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

**When?** The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

**Where?** Directly to the International Bureau of WIPO, 34, chemin des Colombettes  
1211 Geneva 20, Switzerland, Facsimile No.: (41-22) 740.14.35

**For more detailed instructions,** see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. ☐ **With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

- ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.
- ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

**4. Reminders**

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Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the ISA/US  
Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
Facsimile No. (703) 305-3230

Authorized officer  
*Ethan Whisenant*  
Ethan Whisenant, Ph.D.  
Telephone No. (703) 308-0196

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 09010-007WO6	<b>FOR FURTHER ACTION</b>	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
International application No. PCT/US02/20193	International filing date (day/month/year) 24 June 2002 (24.06.2002)	(Earliest) Priority Date (day/month/year) 22 June 2001 (12.06.2001)
Applicant DIVERSA CORPORATION		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

#### 1. Basis of the Report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (See Box II).

4. With regard to the title,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the abstract,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No. \_\_\_\_\_



as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.



None of the figures

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/20193

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C07H 21/02, 21/04; C07K 14/00; G01N 33/53

US CL : 536/23.1, 24.3; 530/350; 435/7.1

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 536/23.1, 24.3; 530/350; 435/7.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Continuation Sheet

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 5,789,228 A (LAM et al) 04 August 1998, see the entire document.	1-59, 66, 69-107, 112-113, 116-120, 126, 131-134 ----- 67-68, 114-115, 121-125, 127-130, 135-180, 186-216
Y	US 5,830,696 A (SHORT) 03 November 1998, see the entire document.	158-180 and 186-191
	US 5,939,250 A (SHORT) 17 August 1999, see the entire document.	158-180 and 186-191
Y	US 5,605,793 A (STEMMER et al) 25 February 1997, see the entire document.	158-180 and 186-191



Further documents are listed in the continuation of Box C.



See patent family annex.

\* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;"

document member of the same patent family

Date of the actual completion of the international search

05 September 2003 (05.09.2003)

Date of mailing of the international search report

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Facsimile No. (703)305-3230

Authorized officer

Ethan Whisenant, Ph.D.

Telephone No. (703) 308-0196

# INTERNATIONAL SEARCH REPORT

PCT/US02/20193

**Continuation of B. FIELDS SEARCHED Item 3:**  
USPATFULL via EAST, Medline, CApplus

STIC earched SEQ ID NOs: 1-2

## NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under Article 19. The Notes are based on the requirements of the Patent Cooperation Treaty and of the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule" and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions, respectively.

### INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only.

**What parts of the international application may be amended ?**

The claims only.

The description and the drawings may only be amended during international preliminary examination under Chapter II.

**When ?** Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

**Where not to file the amendments ?**

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

**How ?** Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

**What documents must/may accompany the amendments ?**

**Letter (Section 205(b)):**

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confounded with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

## PATENT COOPERATION TREATY

PCT

NOTIFICATION CONCERNING  
SUBMISSION OF PRIORITY DOCUMENTS

(PCT Administrative Instructions, Section 411)

From the INTERNATIONAL BUREAU

To:

HAILE, Lisa, A.  
Fish & Richardson P.C.  
Suite 1400  
4225 Executive Square  
La Jolla, CA 92037  
ETATS-UNIS D'AMERIQUE

Date of mailing (day/month/year) 20 August 1997 (20.08.97)		IMPORTANT NOTIFICATION	
Applicant's or agent's file reference 09010/007WO1			
International application No. PCT/US97/08793	International filing date (day/month/year) 22 May 1997 (22.05.97)	Priority date (day/month/year) 22 May 1996 (22.05.96)	
Applicant RECOMBINANT BIOCATALYSIS, INC. et al			

The applicant is hereby notified of the date of receipt by the International Bureau of the priority document(s) relating to the following application(s):

<u>Priority application No.:</u>	<u>Priority date:</u>	<u>Priority country:</u>	<u>Date of receipt of priority document:</u>
08/651,572	22 May 1996 (22.05.96)	US	05 Aug 1997 (05.08.97)

RECEIVED  
AUG 27 1997

FISH & RICHARDSON P.C.  
LA JOLLA, CA

* No Docketing Required *
Reviewed By Practice Systems Initials <i>DCD</i>
Reviewed By Billing Secretary Initials:

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No.: (41-22) 740.14.35	Authorized officer P. Asseeff <i>Asseeff</i>  Telephone No.: (41-22) 338.83.38
---	---

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

## PCT

To:

LISA A. HAILE  
FISH & RICHARDSON P.C.  
4225 EXECUTIVE SQUARE, SUITE 1400  
LA JOLLA CA 92037

### NOTIFICATION OF RECEIPT OF DEMAND

(PCT Rule 61.1(b), first sentence  
and Administrative Instructions, Section 601)

Date of mailing  
(day/month/year)

05 FEB 1998

Applicant's or agent's file reference  
09010/007W01

#### IMPORTANT NOTIFICATION

International application No.  
PCT/US97/08793

International filing date (day/month/year)  
22 MAY 97

Priority date (day/month/year)  
22 MAY 96

Applicant

RECOMBINANT BIOCATALYSIS, INC.

\* No Docketing Required \*

Reviewed By Practice Systems

Initials: *SD*

Reviewed By Billing Secretary

Initials: \_\_\_\_\_

1. The applicant is hereby notified that this International Preliminary Examining Authority considers the following date as the date of receipt of the demand for international preliminary examination of the international application:

19 DEC 1997

RECEIVED

2. This date of receipt is:

FEB 09 1998

☒ the actual date of receipt of the demand.

FISH & RICHARDSON, P.C.  
LA JOLLA, CA

☐ the date on which the proper corrections to the demand were timely received.

3. ☐ This date is **AFTER** the expiration of 19 months from the priority date.

**Attention:** The election(s) made in the demand does (do) not have the effect of postponing the commencement of the national phase until 30 months from the priority date (or later in some Offices) (Article 39(1)). Therefore, the acts for entry into the national phase must be performed within 20 months from the priority date (or later in some Offices) (Article 22).

For details, see Annex B to Form PCT/IB/301 sent by the International Bureau and Volume II of the PCT Applicant's Guide.

☐ This notification confirms the information given in person or by telephone on:

4. Only where paragraph 3 applies, a copy of this notification has been sent to the International Bureau.

Name and mailing address of the IPEA/US  
Assistant Commissioner for Patents  
Box PCT  
Washington, D.C. 20231  
Facsimile No.

Attn: IPEA/US

Authorized officer

*G. Fan*

**PCT INTERNATIONAL SERVICES DIVISION**

Telephone No.



## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US97/08793

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) : Please See Extra Sheet.

US CL : Please See Extra Sheet.

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 435/209, 252.3, 254.11, 277, 320.1, 325; 530/387.1; 536/23.2, 24.32

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Please See Extra Sheet.

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ----- Y	BRONNENMEIER et al. Purification of Thermotoga maritima enzymes for the degradation of cellulosic materials. Applied and Environmental Microbiology. April 1995, Vol. 61, No. 4, pages 1399-1407, see the entire document.	1, 13, 15, 16 ----- 10-12
X ----- Y	BOK et al. Cloning and characterization of an endoglucanase and a xylanase from the hyperthermophilic eubacterium, Thermotoga maritima. Abstracts of the General Meeting of the American Society for Microbiology. 1992, Vol. 92, page 312, see abstract O-20.	1, 13 ----- 10-12, 15, 16



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:	*T	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
*A* document defining the general state of the art which is not considered to be of particular relevance	*X*	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
*E* earlier document published on or after the international filing date	*Y*	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
*L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*&*	document member of the same patent family
*O* document referring to an oral disclosure, use, exhibition or other means		
*P* document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search

05 SEPTEMBER 1997

Date of mailing of the international search report

09 OCT 1997

Name and mailing address of the ISA/US  
Commissioner of Patents and Trademarks  
Box PCT  
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

ERIC GRIMES

Telephone No. (703) 308-0196

International application No.  
PCT/US97/08793

PCT/US97/08793

[illegible]

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US97/08793

## A. CLASSIFICATION OF SUBJECT MATTER:

IPC (6):

C07K 16/40; C12N 1/21, 5/10, 9/42, 15/56, 15/63; C12P 21/02; C12S 3/02

## A. CLASSIFICATION OF SUBJECT MATTER:

US CL :

435/209, 252.3, 254.11, 277, 320.1, 325; 530/387.1; 536/23.2, 24.32

## B. FIELDS SEARCHED

Electronic data bases consulted (Name of data base and where practicable terms used):

APS, Dialog

search terms: cellulase, endoglucanase, glycosidase, AEP11a, Banki gouldi, Microscilla furvescens, Thermotoga maritima, Thermotoga neopolitana, ARP 2.3, Bacillus thermolocovorans, Polyangium brachysporum, Pyrococcus furiosus, Vibrio harveyi

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US97/08793

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :Please See Extra Sheet.

US CL :Please See Extra Sheet.

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 435/209, 252.3, 254.11, 277, 320.1, 325; 530/387.1; 536/23.2, 24.32

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Extra Sheet.

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ----- Y	BRONNENMEIER et al. Purification of Thermotoga maritima enzymes for the degradation of cellulosic materials. Applied and Environmental Microbiology. April 1995, Vol. 61, No. 4, pages 1399-1407, see the entire document.	1, 13, 15, 16 ----- 10-12
X ----- Y	BOK et al. Cloning and characterization of an endoglucanase and a xylanase from the hyperthermophilic eubacterium, Thermotoga maritima. Abstracts of the General Meeting of the American Society for Microbiology. 1992, Vol. 92, page 312, see abstract O-20.	1, 13 ----- 10-12, 15, 16



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
*A* document defining the general state of the art which is not considered to be of particular relevance	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
*E* earlier document published on or after the international filing date	*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
*L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*G* document member of the same patent family
*O* document referring to an oral disclosure, use, exhibition or other means	
*P* document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

05 SEPTEMBER 1997

Date of mailing of the international search report

09 OCT 1997

Name and mailing address of the ISA/US  
Commissioner of Patents and Trademarks  
Box PCT  
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

ERIC GRIMES

Telephone No. (703) 308-0196

International application No.  
PCT/US97/08793

International application No.  
PCT/US97/08793

[illegible]

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US97/08793

## A. CLASSIFICATION OF SUBJECT MATTER:

IPC (6):

C07K 16/40; C12N 1/21, 5/10, 9/42, 15/56, 15/63; C12P 21/02; C12S 3/02

## A. CLASSIFICATION OF SUBJECT MATTER:

US CL :

435/209, 252.3, 254.11, 277, 320.1, 325; 530/387.1; 536/23.2, 24.32

## B. FIELDS SEARCHED

Electronic data bases consulted (Name of data base and where practicable terms used):

APS, Dialog

search terms: cellulase, endoglucanase, glycosidase, AEP11a, Banki gouldi, Microscilla furvescens, Thermotoga maritima, Thermotoga neopolitana, ARP 2.3, Bacillus thermolocovorans, Polyangium brachysporum, Pyrococcus furiosus, Vibrio harveyi

## PATENT COOPERATION TREATY

PCT

NOTIFICATION CONCERNING  
SUBMISSION OF PRIORITY DOCUMENTS

(PCT Administrative Instructions, Section 411)

From the INTERNATIONAL BUREAU

To:

HAILE, Lisa, A.  
Fish & Richardson P.C.  
Suite 1400  
4225 Executive Square  
La Jolla, CA 92037  
ETATS-UNIS D'AMERIQUE

Date of mailing (day/month/year) 20 August 1997 (20.08.97)		IMPORTANT NOTIFICATION	
Applicant's or agent's file reference 09010/007WO1			
International application No. PCT/US97/08793	International filing date (day/month/year) 22 May 1997 (22.05.97)	Priority date (day/month/year) 22 May 1996 (22.05.96)	
Applicant RECOMBINANT BIOCATALYSIS, INC. et al			

The applicant is hereby notified of the date of receipt by the International Bureau of the priority document(s) relating to the following application(s):

<u>Priority application No.:</u>	<u>Priority date:</u>	<u>Priority country:</u>	<u>Date of receipt of priority document:</u>
08/651,572	22 May 1996 (22.05.96)	US	05 Aug 1997 (05.08.97)

RECEIVED  
AUG 27 1997

FISH & RICHARDSON P.C.  
LA JOLLA, CA

* No Docketing Required *
Reviewed By Practice Systems
Initials: <i>QCD</i>
Reviewed By Billing Secretary
Initials:

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# PATENT COOPERATION TREATY

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## PCT

To:

LISA A. HAILE  
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### NOTIFICATION OF RECEIPT OF DEMAND

(PCT Rule 61.1(b), first sentence  
and Administrative Instructions, Section 601)

Date of mailing  
(day/month/year)

**05 FEB 1998**

Applicant's or agent's file reference  
**09010/007W01**

### IMPORTANT NOTIFICATION

International application No.  
**PCT/US97/08793**

International filing date (day/month/year)  
**22 MAY 97**

Priority date (day/month/year)  
**22 MAY 96**

Applicant

**RECOMBINANT BIOCATALYSIS, INC.**

\* No Docketing Required \*

Reviewed By Practice Systems

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1. The applicant is hereby notified that this International Preliminary Examining Authority considers the following date as the date of receipt of the demand for international preliminary examination of the international application:

**19 DEC 1997**

**RECEIVED**

2. This date of receipt is:

**FEB 09 1998**



the actual date of receipt of the demand.

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the date on which the proper corrections to the demand were timely received.

3. ☐ This date is **AFTER** the expiration of 19 months from the priority date.

**Attention:** The election(s) made in the demand does (do) not have the effect of postponing the commencement of the national phase until 30 months from the priority date (or later in some Offices) (Article 39(1)). Therefore, the acts for entry into the national phase must be performed within 20 months from the priority date (or later in some Offices) (Article 22).

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The  
date



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4. Only where paragraph 3 applies, a copy of this notification has been sent to the International Bureau.

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*G. FRI*

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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<b>(51) International Patent Classification <sup>6</sup> :</b> <b>C07K 16/40, C12N 1/21, 5/10, 9/42, 15/56, 15/63, C12P 21/02, C12S 3/02</b>		<b>A1</b>	<b>(11) International Publication Number:</b> <b>WO 97/44361</b> <b>(43) International Publication Date:</b> 27 November 1997 (27.11.97)
<b>(21) International Application Number:</b> PCT/US97/08793 <b>(22) International Filing Date:</b> 22 May 1997 (22.05.97) <b>(30) Priority Data:</b> 08/651,572 22 May 1996 (22.05.96) US <b>(60) Parent Application or Grant</b> (63) Related by Continuation US 08/651,572 (CIP) Filed on 22 May 1996 (22.05.96) <b>(71) Applicant (for all designated States except US):</b> RECOMBI-NANT BIOCATALYSIS, INC. [US/US]; 505 West Coast Boulevard, La Jolla, CA 92037 (US). <b>(72) Inventors; and</b> <b>(75) Inventors/Applicants (for US only):</b> <u>LAM</u> , David, E. [US/US]; 1518 West 249th Street, Harbor City, CA 90710 (US). <u>MATHUR</u> , Eric, J. [US/US]; 2654 Galicia Way, Carlsbad, CA 92009 (US). <b>(74) Agent:</b> HAILE, Lisa, A.; Fish & Richardson P.C., Suite 1400, 4225 Executive Square, La Jolla, CA 92037 (US).		<b>(81) Designated States:</b> AU, CA, IL, JP, US, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).  <b>Published</b> With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.	
<b>(54) Title:</b> ENDOGLUCANASES			
<b>(57) Abstract</b>  The invention provides a purified thermostable enzyme derived from the archaeal bacterium AEP111a. The enzyme has a molecular weight of about 60.9 kilodaltons and has cellulase activity (SEQ ID NO:2). The enzyme can be produced from native or recombinant host cells and can be used to aid in the digestion of cellulose where desired. Also included are other endoglucanases having homology to SEQ ID NO:2.			

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